

**Remarks**

Claims 163, 164, 166 and 170-174 are pending in the Application.

Claims 163, 164, 166 and 170-174 are rejected.

Claim 163 is cancelled herein.

Claims 196-198 are added herein.

**I. STATUS OF APPLICATION**

On January 25, 2006, the Board granted Applicant's Petition to Withdraw Holding of Abandonment Under M.P.E.P. § 711.03(c)(I)(A), filed August 19, 2005. In a Final Office Action, the Examiner "reiterated, repeated and incorporated herein by reference" the Examiner's January 11, 2005 Final Office Action (the "January 2005 Final Office Action"). As such, Applicant will provide reference to the January 2005 Final Office Action where appropriate.

**II. REJECTIONS UNDER 35 U.S.C. § 102/ § 103 OVER KIANG**

Examiner has rejected Claims 163, 164, 166 and 170-174 under 35 U.S.C. § 102(a) and (b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Kiang *et al.* "Structural Modification of Single-Layer Carbon Nanotubes with an Electron Beam," *J. Phys. Chem.* **1996**, 100, 3749-3752, ("*Kiang*"). January 2005 Final Office Action, at 2.

Examiner contends that the "reference teaches on pg. 3750 cut nanotubes. SWNTs are depicted, however, the discussion is general." *Id.*

Regarding rejections under 35 U.S.C. § 102(a) and (b), anticipation requires each and every element of the claim to be found within the cited prior art reference. Regarding rejections under 35 U.S.C. § 103(a), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See M.P.E.P. 706.02(j); see also *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Claim 163 has been cancelled herein without prejudice. Accordingly, the rejection of this claim is now moot.

Regarding Claims 164 and 166, *Kiang* does not teach or suggest a quantum device comprising a conductor or an integrated circuit comprising a plurality of molecular wires, respectively, each of which requires cut single-wall carbon nanotubes integrated into a device. There is no suggestion or motivation in *Kiang*, nor is there any suggestion or motivation in the knowledge generally available to one of ordinary skill in the art, to modify the *Kiang* in order to arrive at these claims of the instant invention. Furthermore, *Kiang* does not teach or suggest all the limitations of the claims.

As to the latter, (*i.e.*, that *Kiang* does not teach or suggest all the limitations of the claims), Applicant respectfully requests the Examiner particularly point out which limitations of the above-cited claim limitations are allegedly taught in the *Kiang* pursuant to 37 C.F.R. §1.104(c)(2). Absent this showing, the Examiner has failed to present a *prima facie* case. "[T]he prior art reference (or references when combined) must teach or suggest all of the claim limitations." M.P.E.P. § 2142; see also M.P.E.P. § 2143.03 ("To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art."); see also *In re Vaeck*, 947 F.2d at 493, 20 U.S.P.Q.2d at 1443; *In re Thrift*, 298 F.3d 1357, 63 U.S.P.Q.2d 2002, 2008 (Fed. Cir. 2002).

As to former, (*i.e.*, the lack of suggestion or motivation missing in *Kiang* to supply these missing elements), the Examiner is required to provide a motivation or suggestion to combine or modify the prior art reference to make the claimed invention. M.P.E.P. § 2142. The showings must be clear and particular and supported by objective

evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding a reference, standing alone, is not evidence. *Id.* And when an examiner (such as here) relies upon his own subjective opinion, this is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation and opinions stated in the January 2005 Final Office Action are insufficient to support a *prima facie* case of obviousness for rejecting Claims 164 and 166.

Thus, each of Claims 164 and 166 is neither anticipated nor *prima facie* obvious.

Regarding Claims 170- 174, *Kiang* similarly does not teach or suggest an RF shielding device, microwave absorbing material, hydrogen storage device, battery or fuel cell, respectively addressed by these claims. Nor does *Kiang* teach or suggest "purified and cut single-wall carbon nanotubes having a homogeneous characteristic selected from the group consisting of lengths, diameters, helicities, end derivatization and combinations thereof," which is a requirement of each of these claims. Furthermore, there is no suggestion or motivation in *Kiang*, nor is there any suggestion or motivation in the knowledge generally available to one of ordinary skill in the art, to modify *Kiang* in order to arrive at these claims of the instant invention. Furthermore, *Kiang* does not teach or suggest all the limitations of the claims.

As requested above, Applicant respectfully requests the Examiner particularly point out which limitations of the above-cited claim limitations are allegedly taught in the *Kiang* pursuant to 37 C.F.R. §1.104(c)(2). Applicant also respectfully asks the Examiner provide the motivation or suggestion to combine or modify *Kiang* to make the claimed invention. And, again, unless both of these are affirmatively shown, the Examiner has failed to present a *prima facie* case.

Thus, each of Claims 170-174 is neither anticipated nor *prima facie* obvious.

Further regarding Claims 173 and 174, and with respect to Examiner's contention "In so far as claims 173, 174 require anything beyond nanotubes, then using SWNTs in a

battery/fuel cell is an obvious expedient to exploit their electrical properties.” January 2005 Final Office Action, at 2. Applicant respectfully traverses Examiner’s contention, including for the reasons discussed above, and supports this traversal with a citation below from the Application at 30, ll.15-17, which cites the use of carbon nanotubes as hydrogen storage devices in battery/fuel cell devices.

Materials including the SWNT molecules can also be used as hydrogen storage devices in battery and fuel cell devices.

Thus, there are other uses of SWNTs in battery/fuel cell devices, and, as such, it would not have been an obvious expedient to exploit their electrical properties in these devices.

Therefore, in view of the foregoing, Applicant respectfully requests that the Examiner not re-issue his rejection of Claims 164, 166 and 170-174 under 35 U.S.C. § 102(a) and (b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over *Kiang*.

### **III. NEW CLAIMS**

Applicant have amended the claims to add new Claims 196-198. No new matter has been added by this amendment.

### **IV. CONCLUSION**

As a result of the foregoing, it is asserted by Applicant that the Claims in the Application are now in a condition for allowance, and respectfully requests allowance of such Claims.

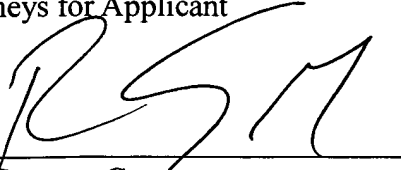
Applicant respectfully requests that the Examiner call Applicant’s attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

11321-P012USD13

PATENT

Respectfully submitted,

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